

## New combinations in the Tropical American *Ctenitis* (Tectariaceae)

ALEXANDRE SALINO and PATRÍCIA OLIVEIRA MORAIS

Departamento de Botânica, Instituto de Ciências Biológicas,  
Universidade Federal de Minas Gerais. Av. Antônio Carlos, 6627,  
Pampulha 31270-901, Belo Horizonte, MG, Brasil

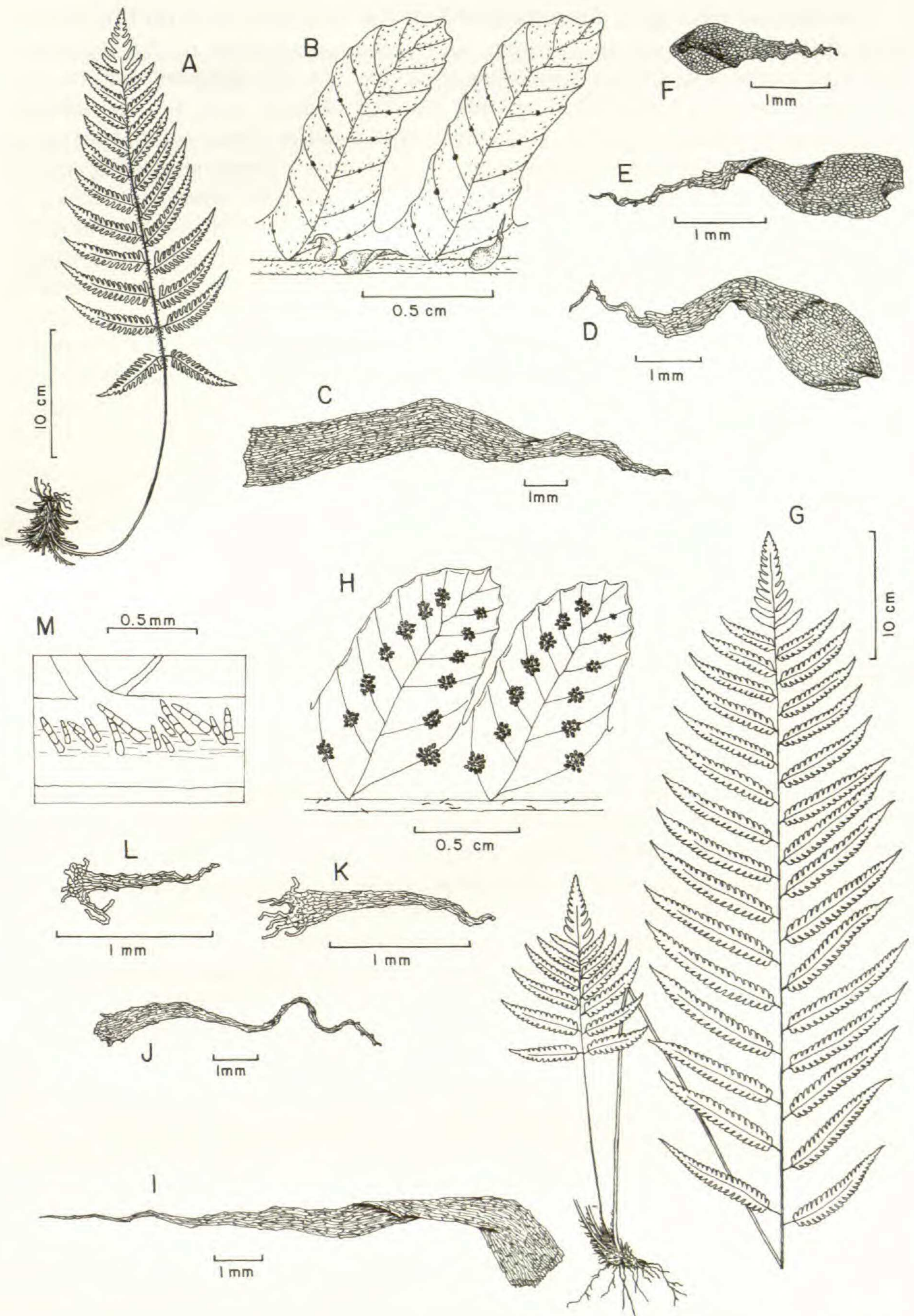
ABSTRACT.—While working on the taxonomy of *Ctenitis* (Tectariaceae) from Brazil we detected two species that needed to have combinations in that genus: *Ctenitis abyssi* (Sehnem) Salino & Morais *comb. nov.* and *Ctenitis laetevirens* (Rosenst.) Salino & Morais *comb. nov.* The first species is similar to *Ctenitis nigrovenia* (H. Christ) Copel., but differs mainly by the short-creeping stem and ctenitoid hairs on the segment margins. *Ctenitis laetevirens* is related to *C. submarginalis* (Langsd. & Fisch) Ching, but differs by having pinnae long-petiolulate, ctenitoid hairs absent on the segment margins, the abaxial side of costae, costule and veins, and by having exindusiate sori.

Besides the earlier monographs by Christensen (1913, 1920) and the surveys of Brade (1972) and Sehnem (1979), nothing else has been published on taxonomy of the Brazilian species of *Ctenitis*. *Ctenitis* is essentially pantropical with 70 to 80 species. About half of these occurs in the Neotropics (Tryon & Stolze, 1991), and 14 to 16 species in Brazil. This genus is closely related to *Lastreopsis* which can be distinguished by the configuration of the adaxial axes. In *Lastreopsis* the ridges are continuous with the ridges on the axes of the next order above or below, while in *Ctenitis* these ridges are lacking or, when present, not continuous onto adjacent axes (Tryon & Stolze, 1991).

Many species were removed from *Ctenitis* and placed in two other genera: *Megalastrum* and *Triplophyllum* both described by Holttum (1986a, 1986b). The differences between these three genera are well discussed by Smith & Moran (1987) and Tryon & Stolze (1991). In southern and southeastern Brazil the species of *Ctenitis* often grow in mesic and moist-shaded habitats such as primary and secondary lowland and montane rain forests, from 0 to 1700 meters in elevation. While working on the taxonomy of Brazilian *Ctenitis* we detected two species that need to be combined in the genus.

***Ctenitis abyssi* (Sehnem) Salino & Morais, *comb. nov.*—*Dryopteris abyssi* Sehnem, Fl. Ilustr. Catar. 1 (Aspidiáceas): 156. 1979. TYPE: Brazil. Rio Grande do Sul: São Francisco de Paula, Taimbé, 17 Feb 1953, Sehnem 6315 (Holotype, PACA!). Fig. 1A–F.**

FIG. 1. A–F. *Ctenitis abyssi* (Sehnem 6315). A. Habit. B. Abaxial side of segments, showing veins and scales. C. Stem scale. D. Petiole scale. E. Rachis scale. F. Scale of abaxial side of costae. G–M. *Ctenitis laetevirens* (Luederwaldt 1814). G. Habit. H. Abaxial side of segments, showing soral position and veins. I. Stem scale. J. Petiole scale. K. Rachis scale. L. Scale of abaxial side of costae. M. Ctenitoid hairs (hydrated) on adaxial side of costae.



This species belongs to *Ctenitis* based on the ctenitoid hairs on the petiole, both sides of the rachis and pinnae, and along the margins of the segments; vein tips not enlarged and terminating at or very near the segment margin; and the presence of a cylindrical glands on the abaxial side of the pinnae. According to Sehnem (1979), *Dryopteris abyssi* differs from other species of the genus by the membranaceous lamina and narrow linear segments, and is related to *Ctenitis nigrovenia* (H. Christ) Copel. *Ctenitis abyssi* is related to *C. nigrovenia* because of its similar pinnae, segments with serrate margins, and bullate scales on the abaxial side of the rachis and costae. However, *C. nigrovenia* lacks ctenitoids hairs on the segments margins, has medial to inframedial sori, and the stem is erect to decumbent. *Ctenitis abyssi* has a short-creeping stem, medial to supramedial sori, and ctenitoids hairs on the margins of the segments. *Ctenitis nigrovenia* is found from southern Mexico to Peru (Tryon & Stolze, 1991), but in Brazil occurs only in the Amazonian region. *Ctenitis abyssi* is a southern Brazil endemic and is known only from the type collection in the Taimbé Cannion region (State of Rio Grande do Sul). It grows on rock at 700 meters in elevation.

***Ctenitis laetevirens*** (Rosenst.) Salino & Morais, *comb. nov.*—*Dryopteris laetevirens* Rosenst., *Hedwigia* 56: 368. 1915. Lectotype (designated here): Brazil. Santa Catarina: Hammonia, Aug 1910, *Luederwaldt 1380* (SP!).  
**Fig. 1G–M.**

This species belongs to the genus *Ctenitis* based on the ctenitoid hairs on the adaxial side of rachis, costae and costules, and the narrow vein tips terminating at or very near the segment margin. According to Rosenstock (1915), this species is related to *Ctenitis submarginalis* (Langsd. & Fisch) Ching and *C. falciculata* (Raddi) Ching. From these species, *C. laetevirens* differs by having the abaxial side of the costae, costules, veins and laminar tissue glabrous, long-petioluled pinnae, and exindusiate sori. Rosenstock (1915) mentioned that *Dryopteris laetevirens* resembles *Ctenitis aspidioides* (C. Presl) Copel. which has cuneate pinnae bases, indusiate sori, and leaves that are brown when dried. *Ctenitis laetevirens* is frequently confused with *C. submarginalis* a species with ctenitoid hairs on the segment margins, the abaxial side of costae, costules and veins, often indusiate sori, a moderately scaly stem, petiole, rachis, costae, and costules. *Ctenitis aspidioides* has long-petioluled pinnae and a poorly developed indumentun, as in *C. laetevirens*, but *C. aspidioides* has conform apical pinnae and ctenitoid hairs on the segment margins. *Ctenitis laetevirens* is endemic to the state of Santa Catarina in southern Brazil. It is terrestrial in the Atlantic Rain Forest between 0 and 100 meters in elevation.

ADDITIONAL SPECIMENS EXAMINED.—BRAZIL. **Santa Catarina:** Blumenau, 1905, *Haerchen 50* (Syntype, UC!); Hansa, October 1911, *Luederwaldt 1815* (US); Hammonia, Jun 1912, *Luederwaldt 1814* (BHCB, NY, SP, SPF, UC); Warrow, 1905, *Goeden 49* (NY, UC).

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